

# A Study on The Functionality and Impact of Chatbots in Online Shopping

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**Abstract**—Chatbots are software applications that engage users online by answering questions, suggesting products, and providing information. This type of technology can be beneficial for answering simple queries and providing automated customer support 24/7. Chatbots provide a quicker conversation compared to customer inquiries via email or phone. Through chatbots customers are connected with the brand, they shop at their long-time favourite store. The study is based on primary data for which data were collected from 60 students from Palakkad. Data collected were analysed using simple percentage tool. This study aims to analyse the Impact of chatbot on Customer Experience and the Challenges faced while interacting with chatbots during online shopping. It is found in the study that Using chatbots, can connect with customers on a personal level efficiently while also improves the marketing strategy. Hence the research provides valuable insights into the prevalence of online shopping habits.

**Index Terms**—Chatbot, Online shopping and Customers.

## I. INTRODUCTION

A chatbot is a software or computer program that simulates human conversation or "chatter" through text or voice interactions. Users in both business-to-consumer (B2C) and business-to-business (B2B) environments increasingly use chatbot virtual assistants to handle simple tasks. Adding chatbot assistants reduces overhead costs, uses support staff time better and enables organizations to provide customer service during hours when live agents aren't available.

### A. Evolution of Chatbots

Chatbots such as ELIZA and PARRY were early attempts to create programs that could at least temporarily make a real person think they were conversing with another person. PARRY's effectiveness was benchmarked in the early 1970s using a version of a Turing test; testers only correctly

identified a human vs. a chatbot at a level consistent with making random guesses. Chatbots have come a long way since then. Developers build modern chatbots on AI technologies, including deep learning, NLP and machine learning (ML) algorithms. These chatbots require massive amounts of data. The more an end user interacts with the bot, the better its voice recognition predicts appropriate responses.

Chatbot use is on the rise in business and consumer markets. As chatbots improve, consumers have less to quarrel about while interacting with them. Between advanced technology and a societal transition to more passive, text-based communication, chatbots help fill a niche that phone calls used to fill.

### B. How do businesses use chatbots?

Chatbots have been used in instant messaging apps and online interactive games for many years and only recently segued into B2C and B2B sales and services. The sales teams can use chatbots to answer noncomplex product questions or provide helpful information that consumers could search for later, including shipping price and availability. Customer service. Service departments can also use chatbots to help service agents answer repetitive requests. For example, a service rep might give the chatbot an order number and ask when the order shipped. Generally, a chatbot transfers the call or text to a human service agent once a conversation gets too complex.

Chatbots can also act as virtual assistants. Apple, Amazon, Google and Microsoft all have forms of virtual assistants. Apps, such as Apple's Siri and Microsoft's Cortana, or products, like Amazon's Echo with Alexa or Google Home, all play the part of a personal chatbot. Chatbots can assist customers in placing orders, guiding them through the process and ensuring a seamless transaction.

### C. Benefits of Chatbot in Online shopping

**Order Tracking:** Users can inquire about the status of their orders, and chatbots can provide real-time updates on shipping and delivery.

- ✓ **Information Retrieval & Product Information:** Chatbots can provide detailed information about products, including specifications, features, and pricing.
- ✓ **Inventory Status:** Users can check product availability, sizes, and colours using chatbots, preventing frustration from out-of-stock items.

**Personalized Shopping Experience:** Chatbots can utilize user data to create personalized profiles, enabling more targeted recommendations and a customized shopping journey.

- ✓ **Wishlist's and Favourites:** Chatbots can help users create and manage wish lists, making it easier for them to keep track of desired items.
- ✓ **Product Reviews:** Chatbots can facilitate the collection of customer feedback and reviews, helping users make informed decisions based on the experiences of others.

### D. Promotions and Discounts:

- ✓ **Promotional Alerts:** Chatbots can notify users of ongoing promotions, discounts, or upcoming sales, encouraging them to take advantage of special offers.
- ✓ **Coupon Assistance:** Users can inquire about and apply relevant coupons or discount codes during the checkout process with the help of chatbots.

### E. Troubleshooting and Issue Resolution:

- ✓ **Problem Resolution:** Chatbots can assist users in resolving common issues, such as order discrepancies, payment problems, or technical difficulties during the shopping process.
- ✓ **Social Media Integration:** Chatbots can facilitate social media sharing of products, wish lists, or purchases, enabling users to engage with their network and potentially drive more traffic to the online store.

### F. Statement of the Problem

In the contemporary landscape of digital commerce, the advent of chatbots has become increasingly prevalent, transforming the way consumers interact with online shopping platforms. The "Role of Chatbot in Online Shopping" presents a dynamic and evolving research area that necessitates comprehensive exploration and analysis. The surge in online

shopping activities has led businesses to integrate chatbots into their platforms as a means to enhance customer engagement, provide personalized assistance, and streamline the overall shopping experience. However, despite the growing adoption of chatbots, there exists a critical need to systematically investigate and understand the multifaceted implications and challenges associated with their implementation in the realm of online retail.

## II. OBJECTIVE OF THE STUDY

- To Evaluate the Impact of chatbot on Customer Experience
- To study the Challenges faced while interacting with chatbots during online shopping

### A. Review of the Literature

Liss Janiboer & Carolina Herando (2022) in their study "The Impact of Chatbots on Customer Loyalty: A Systematic Literature Review" "insights into the influence of chatbots on customer loyalty. System quality, service quality, and information quality are crucial dimensions that a chatbot must meet to give a good customer experience. To make a chatbot more personal, companies can alter the language style. Human-like chatbots lead to greater satisfaction and trust among customers, leading to greater adoption of the chatbot. The results of this study showed that a connection between chatbots and customer loyalty is very likely. Besides, some customers suffer from the privacy paradox because of personalization.

Letizia Lo Presti & Giulio Maggiore (2021) in their study "The role of the chatbot on customer purchase intention: towards digital relational sales" explore the extent to which conversation with a chat-bot on an official website can change the value perception of products and influence the customer purchase intention. Digital assistants may change the online shopping context increasing the hedonic value experience but at the same time reducing the time for decision making by reinforcing the utilitarian value perception of the utilitarian and hedonic products.

Bui Thanh Khoa (2021) in their study "The Impact of Chatbots on the Relationship between Integrated Marketing Communication and Online Purchasing Behavior in The Frontier Market" showed that the perceived usefulness and ease of use of chatbots have positively affected the attitude of online consumers to

the integrated marketing communication (IMC) activities of businesses. Simultaneously, IMC leads to impulse buying as well as the repurchase intention behavior of customers. The study proposed some managerial implications for an online business to enhance the chatbot functions to consumer behaviors in the website.

### III. RESEARCH METHODOLOGY

The study has been done with the primary data collected from the students through questionnaire. A sample of 60 were collected from the students and most of the questions were relating to the role of chatbot in online shopping. Simple percentage tool is applied to process the data and draw interferences.

#### A. Significance of the study

Analysis of the study

Table 1, Online Shopping habits

Particulars		No of Respondents	Percentage
Gender	Male	20	33
	Female	40	67
Age	18-30	60	100
	31-40	0	0
	Above 41	0	0
Area of residence	Urban	0	0
	Semi-Urban	36	60
	Rural	24	40
<b>Online shopping habits</b>			
Level of Engagement in online shopping	Daily	22	37
	Weekly	10	17
	Monthly	24	40
	Occasionally	4	7
Types of Products purchased in Online	Electronics	26	43
	Clothing and Fashion	44	73
	Beauty and Personal Care	26	43
	Books and Stationery	18	30
	Home and Kitchen Appliances	4	7
	Groceries	6	10

Table 1, shows the Online shopping habits. Majority of the 40(67%) of respondents are female. Age group is between 18-30 years. Most of 36(60%) reside in Semi-urban areas. In the case of online shopping

The study aims to reveal insights into the efficiency, accessibility, and overall satisfaction of online shoppers, providing valuable guidance for businesses looking to optimize their digital platforms. Additionally, it contributes to academic understanding, serving as a resource for educators and policymakers grappling with the evolving dynamics of technology in the online retail landscape. Despite its small sample size, the study offers a focused exploration of chatbot influence in online shopping, laying the groundwork for future research and strategic business decisions.

#### B. Limitation of the study

As the present study is mainly based on the primary data in which the opinion is given by the college students may be biased in nature.

habits, Majority of 24 (40%) respondents engage at least monthly once in online shopping in which 44 (73%) respondents shop with beauty and personal care products.

Table 2, Chatbots Interaction

Particulars		No of Respondents	Percentage
Interaction with a chatbots in online shopping	Yes	60	100
	No	0	0
Experience with	Very Satisfactory	6	10

chatbots in online shopping	Satisfactory	24	40
	Neutral	30	50
	Unsatisfactory	0	0
	Very Satisfactory	0	0
Effectiveness of chatbots in assisting during the online shopping process	Very effective	6	10
	Effective	28	47
	Neutral	26	43
	Ineffective	0	0
	Very effective	0	0
Is chatbots helpful for during online shopping	Product recommendation	16	27
	Order tracking	16	27
	Customer support	28	47
Challenges faced while interacting with chatbots during online shopping	Limited understanding of queries	28	47
	Slow response times	14	23
	Difficulty navigating through options	10	17
	Lack of personalization	8	13
Recommendation of chatbot in Future	Yes	30	50
	No	4	7
	Maybe	26	43

Table 2, shows about the chatbot interaction. Majority of the 60(100%) of respondents have interacted with chatbots in online shopping. Most of 30 (50%) respondents are neutrally satisfied with chatbots. 28(47%) respondents find effective of chatbots in assisting during online shopping. Most of the 28(47%) respondents finds customer support is very helpful during online shopping. 28(47%) of respondents says they have limited understanding of queries as it is a challenging one while interacting with chatbots and most of 30(50%) respondents recommend Chatbots in future.

#### IV. CONCLUSION

Chatbots play a key role in creating a personalized online shopping experience for customers. They help to enhance customer experience, provide 24/7 customer service, and streamline the shopping process. Using chatbots, you can connect with customers on a personal level efficiently while also improving your marketing strategy. Hence the research provides valuable insights into the prevalence of online shopping habits, the role of chatbots in customer interactions, and the challenges faced by users. The findings contribute to a nuanced understanding of consumer behaviour in the digital

realm, offering implications for businesses and researchers alike. Future studies may delve deeper into improving chatbot interfaces to address user challenges and enhance overall satisfaction in the online shopping experience.

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